



California Environmental Protection Agency
Department of Pesticide Regulation

Volatile Organic Compound Emissions from Pesticides:

Options for Reducing Non-Fumigant Emissions

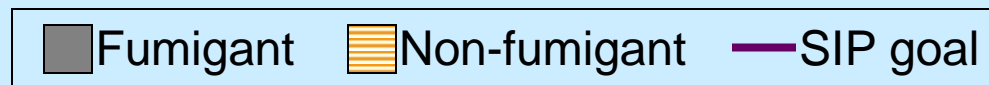
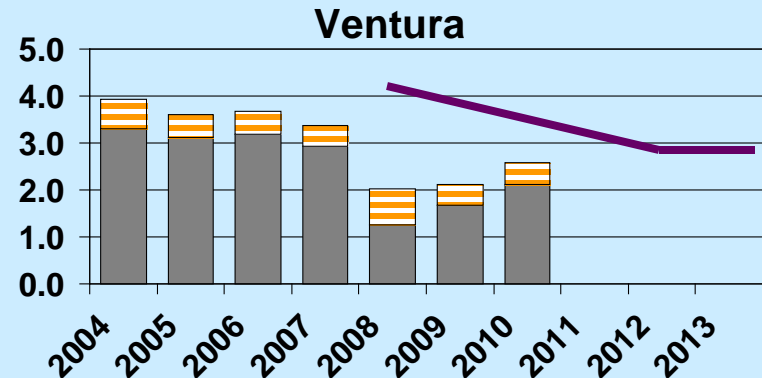
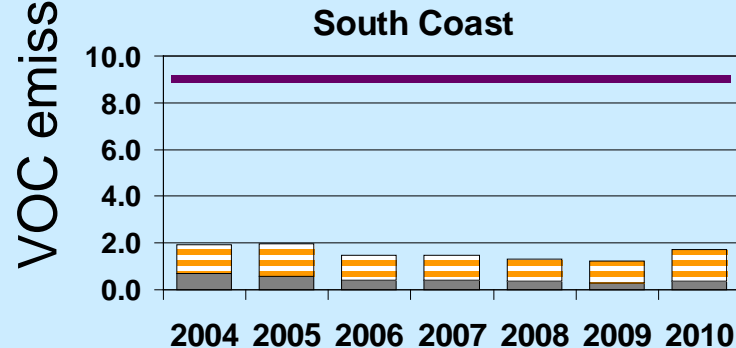
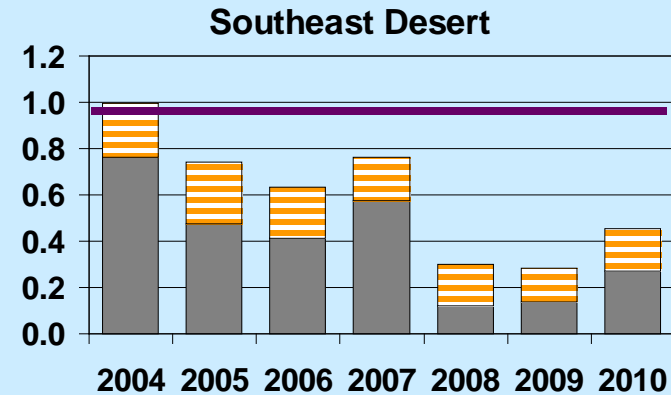
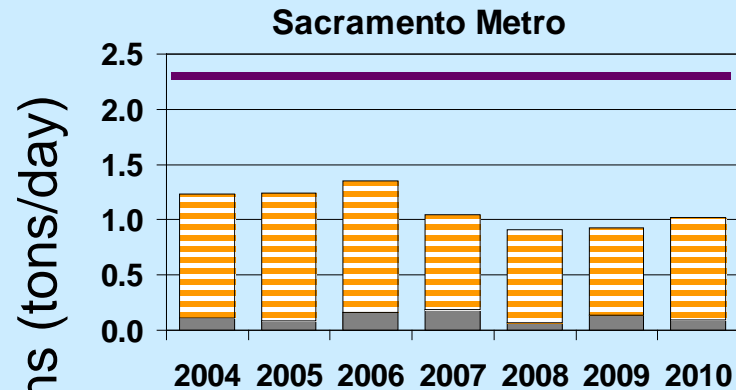
November 2011

Background:

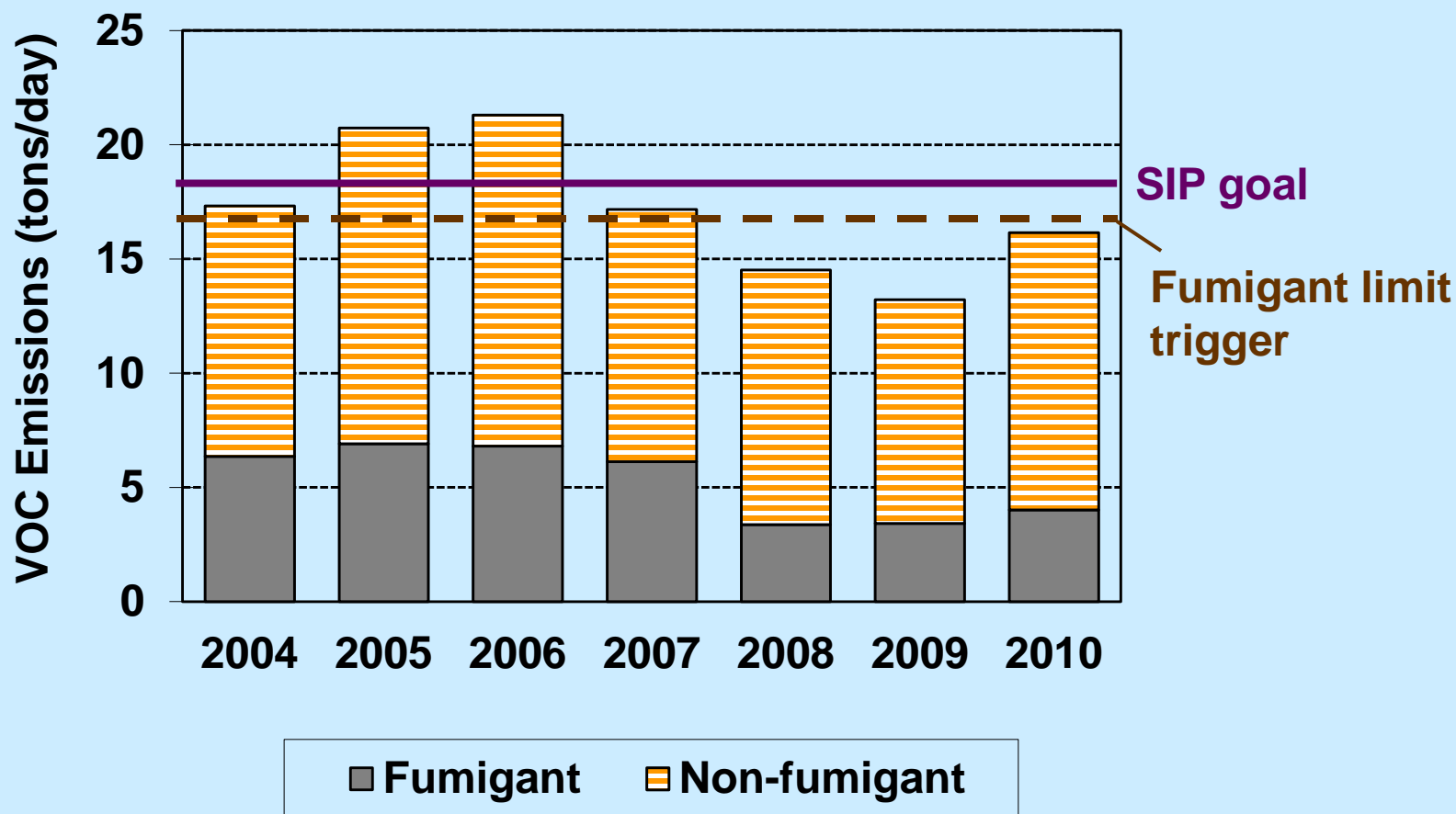
State implementation plan

- As required by Clean Air Act, the state implementation plan (SIP) describes measures to reduce VOCs and NOx to achieve ozone standard
- SIP (pending EPA approval) requires DPR to
 - Develop and maintain an emission inventory to track pesticide VOC emissions
 - Reduce pesticide emissions by specified amounts during May-Oct peak ozone season – San Joaquin Valley pesticide emission limit of 18.1 tons/day
 - Require low-emitting fumigation methods
 - Implement restrictions on non-fumigant pesticides by 2014

Pesticide VOC emission inventory (UPDATED)

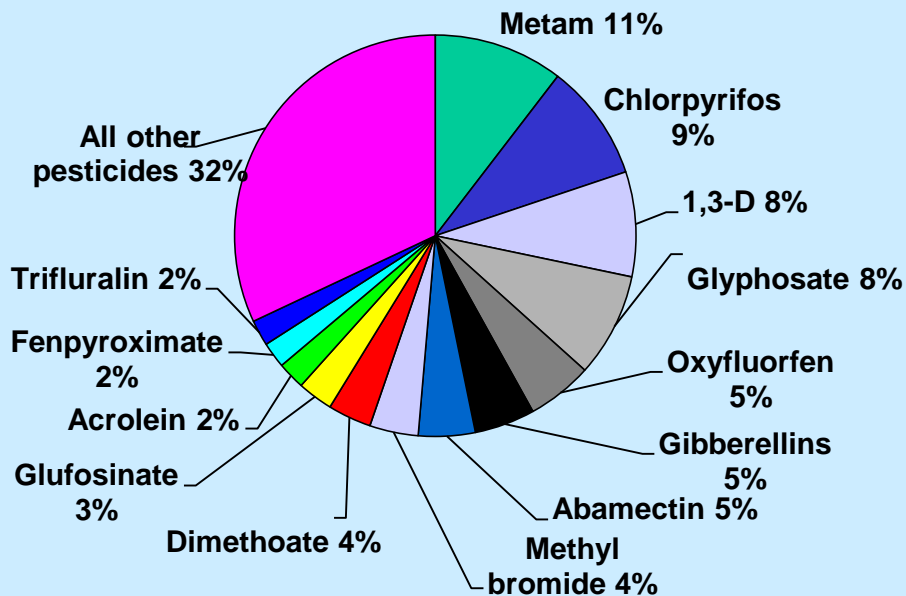


Pesticide VOC emission inventory for San Joaquin Valley (UPDATED)

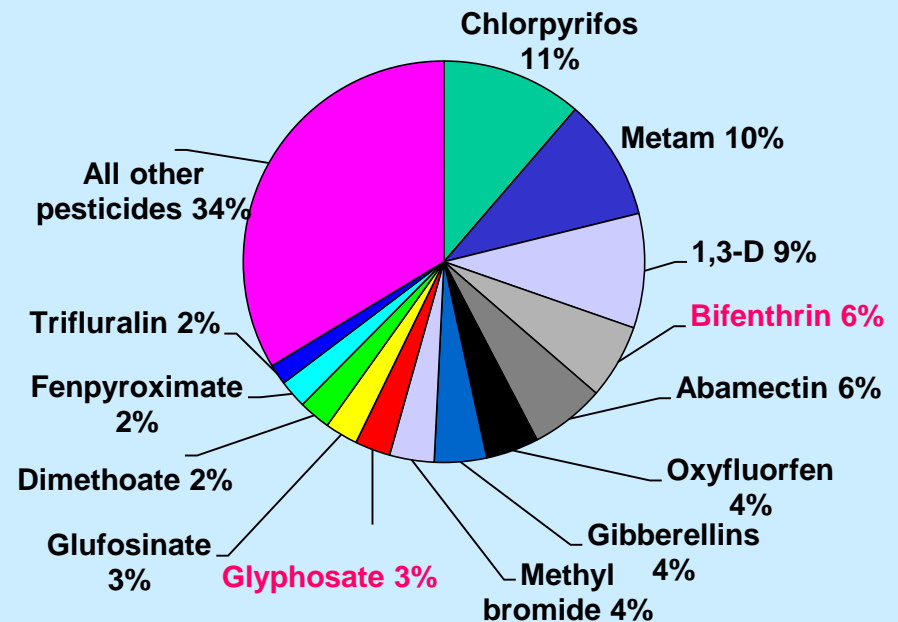


Top VOC pesticides for San Joaquin Valley (UPDATED)

2009



2010



Background:

need for non-fumigant reductions

- SIP requirement – “DPR will implement restrictions to reduce VOC emissions from non-fumigant pesticides by 2014.”
- Maintain San Joaquin Valley SIP emission limit goal (18.1 tons/day)
- Avoid fumigant limit

Pesticides under consideration

- Evaluating restrictions for certain liquid products (emulsifiable concentrates)
 - Chlorpyrifos products (e.g. Lorsban)
 - Oxyfluorfen products (e.g. Goal)
- May include
 - Abamectin products (e.g. Agri-Mek)
 - Gibberellins products (e.g. Gibgro)

DPR criteria for selecting pesticides

- Major non-fumigant contributors in SJV
- “Low-VOC” products available
- Use of low-VOC products likely ensures needed reductions and fumigant allowances not triggered
- Use of low-VOC products likely has lower agricultural impact

Regulatory strategy

- Establish VOC product emission limit based on current product with lowest emissions
 - Percent VOC content (emission potential) limit, or
 - “VOC emission rate” limit (VOC content x application rate)
- Provide exceptions for situations where low-VOC products are not effective
 - (NEW) May not be able to add exceptions after regulations in effect

Options for enforcing a product emission limit

- All options require regulations
- All options prohibit products exceeding emission limit, with exceptions
- Option 1: deny/cancel registrations
- Option 2: prohibit use
- Option 3: add restricted materials
- Option 4: change fumigant limit trigger (preferred)

Enforcing an emission limit:

Option 4 – change fumigant limit trigger

- Replace/amend fumigant limit trigger with trigger prohibiting use of certain non-fumigant high-VOC products, with exceptions
- Annual emission inventory report used to determine if high-VOC prohibition is triggered, and which active ingredients are affected
 - Example: Fall 2013 inventory report would use 2012 PUR to determine if high-VOC prohibition triggered for May-Oct 2014
- If triggered, requirements only in SJV, May-Oct
- 3 possible methods to ensure compliance

Enforcing an emission limit:

Option 4a – “authorizations” for use

- If high-VOC prohibition triggered in SJV during May-Oct, use of high-VOC products would require an “authorization” issued by ag commissioner
- Likely similar to permitting process, but no local evaluation or conditions (yes/no for authorization)
- Regulations would describe the situations for which an ag commissioner could issue an authorization
- DPR would provide fact sheet that explains requirements and lists allowed exceptions to high-VOC prohibition
- No authorization required for low-VOC products

Enforcing an emission limit:

Option 4b – dealer requirements

- If high-VOC prohibition triggered in SJV during May-Oct, compliance through dealer sales requirement
- DPR would notify dealers of requirements and provide a form that explains allowed exceptions to high-VOC prohibition
- As a condition of sale, purchaser must read the form and certify that a high-VOC product is needed for an allowed use
- No requirements for sale of low-VOC products
- Similar to current clopyralid regulations

Enforcing an emission limit:

Option 4c – PCA requirements (NEW)

- If high-VOC prohibition triggered in SJV during May-Oct, compliance through pest control advisor (PCA) requirements
- DPR would notify PCAs and provide a fact sheet that explains requirements and lists allowed exceptions to high-VOC prohibition
- As a condition of use (or sale), grower must obtain a PCA recommendation for a high-VOC product
- No PCA requirements for low-VOC products

Summary of options for proposed regulations

- List of active ingredients affected and product emission limits: chlorpyrifos, oxyfluorfen, others?
- Restrictions on products exceeding emission limit
 - Prohibit affected high-VOC products in SJV, May-Oct
 - Describe exceptions
 - Exceptions due to efficacy for specific crops/pests
 - Other exceptions?
- Enforcement of restrictions on high-VOC products
 - Registration requirements or sales/use requirements
 - Possibly revise fumigant limit trigger

Next steps (REVISED)

- **Nov 2012 – Feb 2013:** Prepare draft regulations
- **Mar/Apr 2012:** Notice proposed regulations for formal public comment
- **Mar/Apr 2013:** Regulations in effect
- **May 2013:** Earliest possible prohibition of high-VOC products

Additional information and comments

- DPR web site
 - www.cdpr.ca.gov
 - Click on “Air” under Quick Finder
 - Click on “Volatile Organic Compound Emissions”
- Send comments on draft emission inventory report by January 2 to
 - Rosemary Neal
 - rneal@cdpr.ca.gov
- Send other comments to
 - Randy Segawa
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 - rsegawa@cdpr.ca.gov